



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/633,694

08/05/2003

Jeffrey A. Anderson

16316-002001

7611

27890 7590 08/23/2007
STEPTOE & JOHNSON LLP
1330 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER

CHAPMAN, JEANETTE E

ART UNIT

PAPER NUMBER

3635

MAIL DATE

DELIVERY MODE

08/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/633,694	ANDERSON, JEFFREY A.	
	Examiner	Art Unit	
	Chapman E Jeanette	3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/9/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30,32-34,36-44,49-51 and 53-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30,32-34,36-44,49-51 and 53-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3635

The amendment filed 11/9/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater".

Applicant is required to cancel the new matter in the reply to this Office Action. Claims 1, 3-15, 27-30, 32-34, 36-44, 49-51, 53-58 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. See above.

Claim Rejections. 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention Was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be

Art Unit: 3635

negatived by the manner in which the invention was made.

Claims 1, 3-15, 17-30, 32-51 and 53-59 are rejected under 35 U.S.C. 103(a) as being Unpatentable over KNAUF (DE 2,336,378) in view of Sucato et al (5605024), Herren (5913788) and Bodnar (5527625).

Knauf discloses a metal framing member 1 comprising:

- a formed metal sheet 2 including a plurality of expanded web slots 9 in a region of the formed sheet metal;
- the expanded web slots include voids and metal web elements 10 in the region of the framing elements;
- the web region and first/second flanges $\frac{3}{4}$ extending from the web region are the surfaces the u-shaped elements 2; the first and second flanges are parallel;
- the first and second flanges include expanded web slots; the legs $\frac{5}{6}$ on the u- shaped members are the closing regions extending the first flange to the second, standard for metal studs, to form the substantially tubular structure;
- Each web slot extends along a length of the framing member;

Sucato et al discloses a metal framing member 61 comprising:

- a formed metal sheet including a plurality of expanded web slots in a region 64/65 of the formed sheet metal; (see column.4, lines 22-30);
- the expanded web slots include voids and metal web elements 62/63 in the

region of the framing elements;

- the web region and first/second flanges extending from the web region are the surfaces shown in figures 20-21 of the u-shaped elements 62/63; the first and second flanges are parallel;
- the web region include expanded web slots shown in figure 21
- the first and second flanges include expanded web slots; the legs on the u- shaped members 62/63 are the closing regions extending the first flange to the second, standard for metal studs, to form the substantially tubular structure;
- Each web slot extends along a length of the framing member;
- The plurality of web slots are arranged in offset five or more columns parallel to the length of the framing member; see figures 20-21;
- Darts or dimples 66 proximate the web slots
- Each expanded web slot has a length to width ratio of about 2:1 or greater;

Regarding claims 10: It is clear that the expanded slots may be formed on any surface were the accompanying function of providing reduction in material content, minimal heat transfer and noise reduction.

The method of manufacturer a framing member comprises:

- providing a formed sheet having a length and a web region
- placing a plurality of slots, formed by stamping, along a portion of the length of the web region; stamping to form the mesh may include passing the sheet of a block in order to

provide a substrate for performing the stamping process;

- stamping includes piercing slots into the region;

- expanding the slots includes mechanically moving the sides of the region apart;

see figure 20-21

It would have been obvious to provide any treatment process to strengthen the integrity of the opening at the perimeter edge; one of ordinary skill in the art would have appreciated employing all known and available means to strengthen the perimeter around the opening to create a better product capable of functioning as intended. Knauf discloses all of the above except for the reinforcements and shown expansion of the slots and the darts of the dimples. The method of expansion shown in figures 20-21 is obvious manner of forming the voids and varying their size.

Bodnar discloses the heat treating process to form the beam and openings. See column 7, lines 50 thru column 8, line 65. It would have been obvious to employ this method to increase the strength of the metal thus also the beam as disclosed by Bodnar.

The form the metal sheet assumes prior to use is a matter of choice; one of ordinary skill in the art would have appreciated using any sheet from any source that is capable of being transported to the place of manufacture.

As with any stud/beam, web the uses are limitless, it is obvious that such studs with openings'/slots may be used to provide for utility wiring and the like; the use of the stud is at the discretion and selection of the construction process and the participants.

Sucato et al shows darts or dimples 66 proximate the slots but lacks the plurality of reinforcements also proximate the web slots. Herren also shows a beam with slots and reinforcements 39 proximate the slot proximate to the web slots and confined to the web elements and exclusive to the web voids. The reinforcements are in the web region positioned along the length.

Bodnar also shows a beam with slots 922 and reinforcements 94,96,98,100,102,104 proximate the slot proximate to the web slots and confined to the web elements and exclusive to the web voids. Bodnar's reinforcements include darts or dimples, including 108 and 110. It would have been obvious to one of ordinary skill in the art to modify Knauf et al by imparting the reinforcements proximate the slots to strengthen the beam structure. The time at which the reinforcements are placed or formed with regard to the slot has been considered a matter of choice not critical or significant to the claimed structure. The limitation of claim 58 lacks criticality. One of ordinary skill in the art would have appreciated forming the reinforcements at any time

Art Unit: 3635

suitable to the construction process which will maintain the structural integrity of the member.

Applicant's arguments have been considered but are not deemed persuasive.

Arguments regarding the rejection under 35 USC 112:

Applicant's disclosure on page 5 line, 18-20 and lines 28-30 and page 6, lines 25-26 and similar disclosures of ratio values are not sufficient to provide support to the expansion values given in percentages.

Arguments regarding the rejection under 35 USC 103:

Knauf and Scucato discloses the essence of the recited invention. Applicant argues that these references do not teach the ratio of distance between adjacent slots prior to expansion to a width of formed metal sheet prior to expansion is 1:8 or greater.

However it is clear there is expansion. It is certainly within the scope of both references to expand the web of the stud to the required dimensions for any particular construction project for which the stud is incorporated.

Herren and Bodnar were merely recited to show both forms of reinforcements around/proximate to the web slots and confined to the web elements and exclusive to the web voids.

The entire teaching of Bodnar and Herren is not bodily incorporated. Familiar in the construction art is that openings are many times reinforced to strengthen the structure

around the openings and the structure itself. This knowledge is not exclusive to expandable web studs. Many times this teaching is not taught merely shown or either it is considered as a secondary consideration.

Further applicant argues that the depressions and flanges of Bodnar are not proximate the web slots and confined to the web elements and exclusive to the web voids. They are separate elements surrounding the web voids. The column and line numbers referenced by applicant's arguments page 5 the first paragraph are not supporting applicants arguments. The flanges are the reinforcements exclusive to the web voids.

Regarding the method:

Applicant argues that Bodnar does not teach or suggest expanding the slots of the web region to form expanded slots having a web elements and a web void and heat treating the member after expanding the slots. In view of the teaching of the primary reference however it is clear that the heat treatment would have to take place after expanding the slot of Knauf or Sucato in order to avoid destroying the teaching of either reference. Again, the teaching of Bodnar is not being bodily incorporated into Knauf or Sucato. Further, Bodnar teaches that the hot rolled method can be applied to a wide variety of different section of metal members.

For the sake of argument if the heat treatment were prior to expansion, the same still is active in strengthening the stud which is the purpose behind heat treatment. Hence, the purpose of the treatment is still realized making the criticality of heat treatment after

Art Unit: 3635

expansion lacking in relevance.

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on *** prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 8/9/2007 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 3635

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chapman E Jeanette whose telephone number is 571-272-6841. The examiner can normally be reached on Mon.-Fri, 8:30-6:00, every other fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeanette Chapman
Primary Examiner
AU 3635